

# SEQUENCE LISTING

<110> Petchpud, Wasinee Nina  
LeBrun, Stewart J.

<120> MICROARRAY-BASED ANALYSIS OF RHEUMATOID  
ARTHRITIS MARKERS

<130> MGENE.016A

<150> 60/417,068

<151> 2002-10-08

<160> 14

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 823

<212> DNA

<213> Homo sapiens

<220>

<221> misc\_feature

<222> (1)...(823)

<223> n = A,T,C or G

<400> 1

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gc nntg ccgc ctataattaa gnngagaaat taactatgag aggatcgcat caccatcacc 60
atcacggatc ccccgggctg caggaattcg gcacgagggc tacttgggag gctgaagtgg 120
gaggatggcc tgagctcaag gagatgcagg ctgcagtggg ctgtgattgt gccactgcac 180
tccagcctgg gcaccaatgt gagcctcgtg ccgaattcgg cacgagggcg gcgttggcgg 240
cttgtgcagc aatggccaag atcaaggctc gagatcttcg cgggaagaag aaggaggagc 300
tgctgaaaca gctggacgac ctgaagggtg agctgtccca gctgcgcgtc gccaaagtga 360
caggcgggtg ggcctccaag ctctctaaga tccgagtcgt ccggaaatcc attgcccggtg 420
ttctcacagt tattaaccag actcagaaag aaaacctcag gaaattctac aaggggcaag 480
aagtacaagc ccttggaaact tgcggcctaa gaagacacgt gccatgcgcc gccgggtcaa 540
caagcaccaa gaaaacctga anaccaagaa gcagcaancn ggaaggaccg gcttgtaacc 600
cgcttgcnng aaattaccgg gtcaaggccn tgagggggcg attggtcaat aaaaccacaa 660
cctggcntga gaaactcacc ccanntntnc ctnactcgag gggggggggc cgggtaancc 720
ccgggggttc gaaccttgca aanccaanct ttaatttaac ttgaaccttt gggaacttcc 780
ctggttgnat taanntncca attnaatgaa ccnnnaaaaa ccc 823

```

<210> 2

<211> 194

<212> PRT

<213> Homo sapiens

<400> 2

```

His His His His His Met Ala Ala Ser Ala Phe Ala Gly Ala Val
 1             5             10            15
Arg Ala Ala Ser Gly Ile Leu Arg Pro Leu Asn Ile Leu Ala Ser Ser
      20            25            30
Thr Tyr Arg Asn Cys Val Lys Asn Ala Ser Leu Ile Ser Ala Leu Ser

```



<222> (1)...(76)

<223> Xaa = Any Amino Acid

<400> 4

```
Thr Leu Thr Lys Gly Asn Lys Ser Trp Ser Ser Thr Ala Val Ala Ala
 1              5              10              15
Ala Leu Glu Leu Val Asp Pro Pro Gly Cys Arg Asn Ser Ala Arg Gly
              20              25              30
Phe Ala Ala Arg Thr Gln Val Ser Glx Lys Leu Pro Leu Lys Ala Lys
              35              40              45
Met Gly Lys Glu Lys Thr Xaa Ile Asn Ile Val Val Ile Gly His Val
              50              55              60
Asp Ser Gly Lys Ser Thr Thr Thr Gly Arg Arg Xaa
65              70              75
```

<210> 5

<211> 542

<212> DNA

<213> Homo sapiens

<220>

<221> misc\_feature

<222> (1)...(542)

<223> n = A,T,C or G

<400> 5

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gtaaaacgac ggccagtgaat ttgtaatac actcactata gggcgaattg ggtaccgggc 60
ccccctcga gttttttttt ttttttttat tgggtcngt ctaatccttt ttgtagtcac 120
tcataggcca gacttngggc tagnatgatn gattaataag agggatgaca taactattag 180
tggncaggnt ngttgtttgt agnggctcnt ggcaggggna aaaggagggc aaatttctag 240
atcaaataaa taagaaggta atagctacta aanaaagaat tttaatgnag aaagggaccc 300
gggcgggnngg atataggggc naagccgcnc tcgtaagggg tgggattttt ctatgtagcc 360
nntngagttg tggtnagtcn aaaattttaa aaattattag tagtaaaggc ctagggaggg 420
ntgttgccct cgtgcccga ttnccctgcc gcccgggggg aatccncta gttcctaaga 480
gccggcccc nccccngaag ggangctccc agcctttttg atccctttng tggngngtta 540
at                                                                 542
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<210> 6

<211> 197

<212> PRT

<213> Homo sapiens

<220>

<221> VARIANT

<222> (1)...(197)

<223> Xaa = Any Amino Acid

<400> 6

```
Val Lys Arg Arg Pro Val Asn Cys Asn Thr Thr His Tyr Arg Ala Asn
 1              5              10              15
Trp Val Pro Gly Pro Pro Ser Ser Phe Phe Phe Phe Tyr Ser Ala
              20              25              30
Xaa Ser Asn Pro Phe Cys Ser His Ser Glx Ala Arg Leu Xaa Ala Xaa
              35              40              45
```

Met Xaa Asp Glx Glx Glu Gly Glx His Asn Tyr Glx Trp Xaa Xaa Xaa  
50 55 60  
Leu Phe Val Xaa Ala Xaa Gly Arg Xaa Lys Arg Arg Ala Asn Phe Glx  
65 70 75 80  
Ile Lys Glx Ile Arg Arg Glx Glx Leu Leu Xaa Lys Glu Phe Glx Xaa  
85 90 95  
Arg Lys Gly Pro Gly Arg Xaa Asp Ile Gly Xaa Lys Pro Xaa Ser Glx  
100 105 110  
Gly Val Gly Phe Phe Tyr Val Ala Xaa Xaa Val Val Xaa Ser Xaa Lys  
115 120 125  
Phe Asn Lys Leu Leu Val Val Lys Ala Glx Gly Gly Xaa Leu Pro Ser  
130 135 140  
Cys Pro Asn Xaa Leu Pro Ala Arg Gly Glu Ser Xaa Glx Phe Leu Arg  
145 150 155 160  
Ala Gly Pro Xaa Pro Xaa Arg Xaa Ala Pro Ser Leu Phe Asp Pro Phe  
165 170 175  
Xaa Xaa Xaa Leu Ile Xaa Gly Gly Ala Phe Lys Xaa Lys Ala Tyr Pro  
180 185 190  
Xaa Pro Xaa Pro Xaa  
195

<210> 7  
<211> 705  
<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (1)...(705)  
<223> n = A,T,C or G

<400> 7  
attaaccctc actaaaggga acaaaagctg gagctccacc gcggtggcgc cgctctagaa 60  
ctagtgggat cccccgggct gcaggaaatt cggcaccgagg gaanaatccg ncgcgtccac 120  
aannaccntt ncccccaac caacannaan aacanttcnn ncnnaaatcn aagtntccn 180  
agactnanaa tcnnccatnt natntaaatt ttctgggggg gggnnccng naancnaaat 240  
tccccctta nggaaggggg nccttntnna nangngnnat nctttaaagn cnaaangcct 300  
ttntncnnna taanccentt ntctttgggg gctccnaaa tttataacc ncnaggancc 360  
ncgggnttct ttntttancn ccccttnnaa antanttnnn ggtnttnaan ancggnttcc 420  
ccncgggtnn tgggcatntn ttttncgcg ncgnttatag aganaaaaaa aaantttnt 480  
tcncccttta tacaccggca nttaaaantt ngaaaancng ggnaannngg ngttnttnn 540  
aaaaaacnaa atntttntt tnagccncna aaaaaanctg agttggcccc cncnnaacc 600  
ccnttgnggg gaaaantnaa aaagtgcana ccccnctct ncccnatct aganaagtag 660  
ntcctcccc cctcccnna aaanntaggg agnnnctccc gnnnc 705

<210> 8  
<211> 644  
<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (1)...(644)  
<223> n = A,T,C or G

<400> 8  
 attaacccctc actaaaggga acaaaagctg gagctccacc gcggtggcgg ccgctctaga 60  
 actagtggat cccccggggn gcncgaattc ngaangaggc ctcntgccna ntncnntatga 120  
 nagcgaagga ngtnannnag ntcgnaccng attgacctn aggatatcca ntacncnang 180  
 gggggcccggn nncccaatnc nccctatagt gagtcnnatc acaattcact ggaccgncgt 240  
 ttcaaagggn gagntttggg ggtaagncta tacctaacc nctctcggnn ttganttaca 300  
 cgtncncggt cngtcattca ncaancacca attgagtnnt nancnggtcc tccaggctng 360  
 nggttgcntn nggggggnct nagnannaag aattttcaag gctgaaatcc cnntttaacc 420  
 cccaantngn nnagnaaggg nggtncgtcc caannacaaa aaatttgggg atannnggca 480  
 aggtannncc angttgnanc ccaacagggt nccccnngn acagnaacnt gggggnatnt 540  
 ngaaaaacntc nncntntnnc nccnnaatng ngagtnaatg ggggcnnncc cccatttggn 600  
 gaaaaattnc gngganccgg nccncgggan tttnaaatna aanc 644

<210> 9  
 <211> 215  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> VARIANT  
 <222> (1)...(215)  
 <223> Xaa = Any Amino Acid

<400> 9  
 Ile Asn Pro His Glx Arg Glu Gln Lys Leu Glu Leu His Arg Gly Gly  
 1 5 10 15  
 Gly Arg Ser Arg Thr Ser Gly Ser Pro Gly Xaa Xaa Glu Phe Xaa Xaa  
 20 25 30  
 Arg Pro Xaa Ala Xaa Xaa Xaa Glx Xaa Arg Arg Xaa Xaa Xaa Xaa Ser  
 35 40 45  
 Xaa Xaa Ile Asp Xaa Xaa Asp Ile Xaa Tyr Xaa Xaa Gly Gly Pro Xaa  
 50 55 60  
 Pro Asn Xaa Pro Tyr Ser Glu Xaa Xaa His Asn Ser Leu Asp Xaa Arg  
 65 70 75 80  
 Phe Lys Gly Xaa Xaa Leu Gly Val Xaa Leu Tyr Leu Thr Xaa Ser Arg  
 85 90 95  
 Xaa Glx Xaa Thr Arg Xaa Arg Xaa Val Ile Xaa Gln Xaa Pro Ile Glu  
 100 105 110  
 Xaa Xaa Xaa Gly Pro Pro Gly Xaa Xaa Leu Xaa Xaa Gly Xaa Xaa Xaa  
 115 120 125  
 Xaa Lys Asn Phe Gln Gly Glx Asn Pro Xaa Leu Thr Pro Xaa Xaa Xaa  
 130 135 140  
 Xaa Lys Xaa Gly Xaa Ala Gln Xaa Gln Lys Ile Trp Gly Xaa Xaa Ala  
 145 150 155 160  
 Arg Xaa Xaa Xaa Val Xaa Xaa Gln Gln Gly Xaa Pro Xaa Xaa Xaa Asn  
 165 170 175  
 Xaa Gly Xaa Xaa Xaa Lys Xaa Xaa Xaa Xaa Pro Xaa Xaa Xaa Xaa  
 180 185 190  
 Asn Gly Gly Xaa Pro Pro Phe Xaa Glu Lys Xaa Xaa Gly Xaa Xaa Xaa  
 195 200 205  
 Arg Xaa Phe Xaa Xaa Lys Xaa  
 210 215

<210> 10  
 <211> 665  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)...(665)  
 <223> n = A,T,C or G

<400> 10  
 attaaccctc actaaaggga acaaaagctg gagctccacc gcggtggcgg ccgctctaga 60  
 actagtggat cccccgggct gcccggtacc caattcgccc tatagtgagt cgtattacaa 120  
 ttcaactggcc gtcgttttac aagggcgagc ttgaaggtaa gcctatccct aaccctctcc 180  
 tcggtctcga ttctacgcgt accggtcatc atcaccatca ccattgagtt taaacgggtct 240  
 ccagcttggc tgttttggcg gatgagagaa gattttcagc ctgatacaga ttaaatacaga 300  
 aacgcangaa gnggggtctt ataaaaacaa gaaatttggc cttggcgggn agttagcngc 360  
 gggtnngtnc ccaccctnga ccccatcgcc cgaaactcac gnaagntgaa aaccgcccgg 420  
 naaccgcccg nattgggtaa gtggtggggg gtccttcccc cattgccgaa naagntnngg 480  
 ggaaactngc ccagggcact tcaaaatnaa aaaacgnaaa ggggctnnan gtccgaaaaa 540  
 naaattgggg gcctttcccc ggttgnaaac ctggttgggt ttggggccgg ggggaacncc 600  
 tctcctngn agtttnggac aaaaatcccc ccnggggnnc gcgggatttt gaaaccgttn 660  
 tgcnn 665

<210> 11  
 <211> 222  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> VARIANT  
 <222> (1)...(222)  
 <223> Xaa = Any Amino Acid

<400> 11  
 Ile Asn Pro His Glx Arg Glu Gln Lys Leu Glu Leu His Arg Gly Gly  
 1 5 10 15  
 Gly Arg Ser Arg Thr Ser Gly Ser Pro Gly Leu Pro Gly Thr Gln Phe  
 20 25 30  
 Ala Leu Glx Glx Val Val Leu Gln Phe Thr Gly Arg Arg Phe Thr Arg  
 35 40 45  
 Ala Ser Leu Lys Val Ser Leu Ser Leu Thr Leu Ser Ser Val Ser Ile  
 50 55 60  
 Leu Arg Val Pro Val Ile Ile Thr Ile Thr Ile Glu Phe Lys Arg Ser  
 65 70 75 80  
 Pro Ala Trp Leu Phe Trp Arg Met Arg Glu Asp Phe Gln Pro Asp Thr  
 85 90 95  
 Asp Glx Ile Arg Asn Ala Xaa Xaa Gly Ser Glx Glx Lys Gln Glu Ile  
 100 105 110  
 Trp Pro Trp Arg Xaa Val Ser Xaa Gly Xaa Xaa Pro Thr Xaa Asp Pro  
 115 120 125  
 Ile Ala Arg Asn Ser Xaa Lys Xaa Lys Thr Ala Arg Xaa Pro Pro Xaa  
 130 135 140  
 Leu Gly Lys Trp Trp Gly Val Leu Pro Pro Leu Pro Xaa Lys Xaa Xaa  
 145 150 155 160

Gly Asn Xaa Pro Arg Ala Leu Gln Asn Xaa Lys Thr Xaa Arg Gly Xaa  
165 170 175  
Xaa Ser Glu Lys Xaa Ile Gly Gly Leu Ser Arg Val Xaa Asn Leu Val  
180 185 190  
Gly Phe Gly Ala Gly Gly Asn Xaa Xaa Ser Xaa Xaa Phe Xaa Thr Lys  
195 200 205  
Ile Pro Xaa Gly Xaa Arg Gly Ile Leu Lys Pro Xaa Cys Xaa  
210 215 220

<210> 12  
<211> 661  
<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (1)...(661)  
<223> n = A,T,C or G

<400> 12  
taatacgaact cactataggg cgaattgggt accggggcccc ccctcgagtt, tttttttttt 60  
ttnttttttt tttnttttnc tntttttntt ttntttntnn ctnccttttt ctatnttctt 120  
tttncctcca ctctacnggg gnntcccccg ngggggcaaaa ncccnnnncc nggggggnnc 180  
ntnttttttt ggggggncccc ccccnngggg ggnncccnct ttttttttcc cctttntntg 240  
gggggtttta angggngnt tnnnggggna ganattaccn ancccccccc cccggnnncn 300  
nanttcnccg cgantnccgg ngngtcttcc cccctttccc ttgnggnttt aaagggngcc 360  
nccnntttt ccgnnttttt tnnngcnnggg gaaaaaaaaa aaaatttnnc cccctggntn 420  
cccccaattt nannncccc gnccccccca anaaanggtt ttnnnnaaan aaanaaaan 480  
ttttntctgn ggggggcnaa aaaagnccgg gggggntccc cccccgggn cccctgtgg 540  
gggtaatttt tcaaangggg naacccccctc ntntaccccc nnttggtntc tggggggggg 600  
nccccccncc cncctcngaa gaaaggnggg atanngttcn tccctcnacn tanaaaaaan 660  
n 661

<210> 13  
<211> 16  
<212> PRT  
<213> Homo sapiens

<400> 13  
Glx Tyr Asp Ser Leu Glx Gly Glu Leu Gly Thr Gly Pro Pro Leu Glu  
1 5 10 15

<210> 14  
<211> 57  
<212> PRT  
<213> Homo sapiens

<400> 14  
Leu Thr Leu Thr Lys Gly Asn Lys Ser Trp Ser Ser Thr Ala Val Ala  
1 5 10 15  
Pro Leu Asn Trp Asp Pro Pro Gly Cys Arg Lys Phe Glu Phe Pro Ala  
20 25 30  
Ala Arg Gly Ile Pro Leu Val Leu Glu Arg Arg His Arg Gly Gly Ala

35 40 45  
Pro Ala Phe Val Pro Phe Ser Glu Gly  
50 55